

What is claimed is:

1. A prosthetic disc replacement device for use between vertebrae in the spine, comprising:

a first plate containing a through slot and a pivot pin spanning said slot;

5 a second plate, spaced apart from said first plate, containing a through slot and a pivot pin spanning said slot;

a first fixation component coupled to said first plate for rotation about said pivot pin from an unactuated position within the interior of said device to an actuated position exterior to said device;

10 a second fixation component coupled to said second plate for rotation about said pivot pin from an unactuated position within the interior of said device to an actuated position exterior to said device;

and an actuation member, capable of insertion between said first and second plates of said device to shift said first and second fixation components through said through slots to the exterior of said device to affix said device between the vertebrae.

2. The device of claim 1, wherein said first and second fixation components each contain a first camming edge which tapers away from said pivot pin within said device when said device is unactuated and a second affixing edge which tapers away from said pivot pin outside said device when said device is in its actuated position.

3. The device of claim 1, wherein said first and second fixation components lie in the same plane.

4. The device of claim 3, wherein said first edges of said fixation components contact each other when said components are in said unactuated position.
5. The device of claim 1, wherein said first plate and said second plate maintain a parallel orientation.
6. The device of claim 1, wherein each of said first and second plates have a hollow interior and an end containing an aperture, such that a bone growth promoting substance may be injected into the interior of each plate.
7. The device of claim 1, wherein said first and second fixation components maintain a side by side relationship within the interior of said device when said component is in its unactuated position.
8. The device of claim 7, wherein said first and second plates each contain a recess for accommodating a section of the opposing fixation device when said component is in its unactuated position.
9. The device of claim 6, wherein said bone growth promoting substance comprises bone morphogenetic protein (BMP).
10. The device of claim 1, wherein first and second plates are composed of bone.
11. The device of claim 6, wherein each of said first and second plates contain a plurality of channels within said plates.
12. The device of claim 2, wherein said actuation member contains a first surface for contacting said camming edge of said first fixation component and a second surface for contacting said camming edge of said second fixation component.

13. The device of claim 2, wherein when said first and second fixation components are at the actuated portion, said affixing edge of each component is held tightly in the cancellous bone of the vertebrae.
14. The device of claim 12, wherein said first and second contacting surfaces of said actuation member each comprise a contact line.
15. A method of installing a prosthetic disc replacement device between vertebrae in the spine, comprising the steps of:
- a. placing between vertebrae of a spine a device, comprising a first plate containing a through slot and a first fixation component, rotatably coupled within said slot, a second plate parallel to said first plate containing a through slot and a second fixation component rotatably coupled within said slot;
  - b. and inserting a actuation member between said first and second plates to shift said first and second fixation components out of the respective plates to affix said fixation components into adjacent vertebrae.
16. The method of claim 15, further comprising:
- a. using a syringe to inject a bone growth promoting substance into an aperture within each plate when said device is between the vertebrae.
17. The method of claim 16, wherein said bone growth promoting substance comprises bone morphogenetic protein (BMP).